

E. AA-BB AIR REGULATIONS

The Permittee must comply with the requirements of 40 CFR 264 Subparts AA and BB, as applicable. Within 90 days of the effective date of this Permit, the Permittee shall submit to the Administrative Authority a report which must contain, at minimum, the following information:

1. An equipment list which includes all the information required under 264.1064(b)(1) for equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight, and a list of all process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations managing hazardous waste with organic concentrations of at least 10 percent by weight.
2. For the process vents listed above, the amount of vent emissions in lb/hr or kg/hr, and in lb/yr or kg/yr.
3. If the emissions in paragraph 2 of this section exceed the emission limits cited in 264.1032(a)(1), the report must detail the manner in which compliance will be obtained, i.e., by the reduction of total organic emissions to the limits in 264.1032(a)(1), or reduction by means of a control device per 264.1032(a)(2).
4. If a closed-vent system and control device is installed to comply with the requirements in 264.1032(a)(2), provide the following information:
 - a. An implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation per 40 CFR 264.1033(a)(2).
 - b. The type of control device under 264.1033 to be installed (e.g. vapor recovery, flare, etc.).
5. If the Permittee feels any of the requirements of this Permit Condition VII.E, or of 40 CFR 264 Subparts AA and BB, are not applicable to this facility, the Permittee must provide justification for this decision as part of the report.

F. CORRECTIVE ACTION

1. Corrective Action for Releases: Section 3004(u) of RCRA, as amended by HSWA, and 40 CFR 264.101, require that permits issued after November 8, 1984, address corrective action for releases of hazardous waste including

hazardous constituents from any SWMU at the facility, regardless of when the waste was placed in the unit.

2. Releases Beyond Facility Boundary

a. The Permittee shall notify the Administrative Authority verbally, within 24 hours of discovery, of any release of hazardous waste or hazardous constituents that has the potential to migrate off-site.

b. Section 3004(v) of RCRA as amended by HSWA, and Federal regulations promulgated as 40 CFR 264.101(c), require corrective actions beyond the facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where offsite access is denied.

3. Financial Responsibility: Assurances of financial responsibility for corrective action shall be provided as specified in the Permit following major modification for remedy selection.

4. Dispute Resolution

a. The parties shall use their best efforts to informally and in good faith resolve all disputes or differences of opinion. If, however, disputes arise concerning the corrective action which the parties are unable to resolve informally, the following procedures shall apply. If Permittee's dispute concerns its inability to meet a specified deadline, then Permittee is obligated to advise the Administrative Authority of the issue at least 30 days in advance of the deadline.

b. The Administrative Authority shall provide Permittee written notice of its disapproval or modification of any interim submission under HSWA, including, but not limited to, implementation of workplans, approval of documents, scheduling of any work, or selection, performance, or completion of any correction action. The written notice of disapproval or modification shall set forth the reasons for the disapproval or modification. If the Permittee disagrees, in whole or in part, with any such written notice, the Permittee shall notify the RCRA permits staff manager (i.e., RCRA Permits Branch Chief when EPA is the Administrative Authority), in writing, within 10 days of receipt of the written notice. The

Permittee and the RCRA permits staff shall use their best efforts to informally and in good faith resolve the dispute. The Permittee is entitled to meet with RCRA permits staff in person at the Administrative Authority's office or by teleconference, if it so desires, in order to resolve the dispute.

c. If Permittee and the RCRA permits staff are unable to resolve the dispute, the Permittee may request a final decision by the Administrative Authority's official who is delegated final permit approval authority (i.e., the EPA Division Director who signed the permit when EPA is the Administrative Authority). Within 30 days of receipt of the Administrative Authority's written notice, the Permittee shall submit to the permit approval authority, a written statement of its arguments and explanations of its position. The written statement should include, at a minimum, the specific points of dispute, the position the Permittee maintains should be adopted as consistent with the Permit requirements and the basis therefore, any matters which it considers necessary for proper determination of the dispute, and whether the Permittee requests an informal conference in front of the permit approval authority. The Permittee's failure to follow the procedures set forth in this paragraph will constitute a waiver of its right to further consideration of the dispute.

d. The Administrative Authority's duly appointed official having final permit approval authority, at his/her discretion, will determine whether an informal conference, if requested by the Permittee, will be held.

e. The Administrative Authority shall consider the written position of the Permittee and the oral arguments, if an informal conference is convened, and shall provide a written statement of its decision based on the record. This statement shall be considered to be incorporated as an enforceable part of the permit. The written statement shall respond to the Permittee's arguments and shall set forth the reasons for the Administrative Authority's final decision. Such decision shall be the final resolution of the dispute and shall be implemented immediately by the Permittee according to the schedule contained therein.

f. Notwithstanding the invocation of this dispute resolution procedure, the Permittee shall proceed to take any action required by those portions of the submission and of the permit the Administrative Authority determines are not substantially affected by the dispute.

g. The Permittee shall invoke the Dispute Resolution provisions of this Permit in good faith and not for purposes of delay.

G. REPORTING REQUIREMENTS

1. The Permittee shall submit, in accordance with Permit Condition VII.B.7, signed quarterly progress reports of all activities (i.e., RFI, CMS) conducted pursuant to the provisions of this Permit beginning no later than ninety (90) calendar days from the effective date of this Permit. These reports shall contain:
 - a. A description of the work completed and an estimate of the percentage of work completed;
 - b. Summaries of all findings, including summaries of laboratory data;
 - c. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems;
 - d. Projected work for the next reporting period;
 - e. Summaries of contacts pertaining to corrective action or environmental matters with representatives of the local community, public interest groups or State government during the reporting period;
 - f. Changes in key project personnel during the reporting period; and
 - g. Summaries of all changes made in implementation during the reporting period.
2. Copies of other reports (e.g., inspection reports), drilling logs and laboratory data shall be made available to the Administrative Authority upon request.
3. In addition to the written reports, at the request of the Administrative Authority, the Permittee shall provide status review through semi-annual briefings with the Administrative Authority.

H. NOTIFICATION REQUIREMENTS FOR AND ASSESSMENT OF NEWLY-IDENTIFIED SWMUS AND AOCs

1. The Permittee shall notify the Administrative Authority, in writing, of any newly-identified SWMU(s) (i.e., a unit not specifically identified during the RFA), discovered

The lead reclamation process is exempt from Federal and Louisiana Hazardous Waste permitting regulations. A portion of the lead-bearing raw materials used by SMC (i.e., K069 sludges, by-products, characteristic lead bearing materials and reclaimed spent lead acid batteries) have been classified as hazardous wastes by the State of Louisiana. Some of these materials may also carry hazardous waste codes for arsenic (D004), chromium (D007), cadmium (D006), selenium (D010), or silver (D011). Other raw materials such as lead bearing sludges and by-products are federally exempt from RCRA regulations but are regulated in Louisiana as Group II Recyclable Materials.

Facility Process Description

SMC is a secondary lead smelter utilizing a blast furnace/reverbatory furnace process to recycle lead from spent batteries and other lead-bearing materials into lead pig and block ingots. These products are used by their customers to make lead acid batteries, weights, ammunition, bearings, chemicals, sound shielding and radiation shielding (LDEQ, 1997).

Spent batteries are typically received on truck trailers which are parked in a permitted, bermed, concrete storage area. Whole batteries are unloaded from the storage trailers onto a conveyor belt. On the belt, the batteries are run through a circular saw for removal of the plastic casing of the battery. The battery acid is collected, filtered and sold to Agrico Chemicals as a commercial product. The lead plates are removed from the batteries and washed to remove any remaining acid. Residual acid on the cases is neutralized and treated in the waste water treatment unit prior to discharge through an NPDES permitted outfall into Bayou Baton Rouge. The shell is then processed by a hammer mill that shreds the plastic cover and recovers any residual sludge. The plastic is washed and sold for recycling (LDEQ, 1997).

Blast and reverbatory furnaces are used to produce both hard and soft lead, respectively. Charges are directed to the furnaces which produces layers of molten lead and slag. The molten lead layer is poured into a drossing kettle where copper, tin, and antimony are added or removed to meet individual product specifications. The slag is produced during the smelting process and is removed from the furnace, poured into molds, solidified, and charged into the blast furnace for further lead recovery. The second slag formation is deposited onsite in the Slag Waste Storage Area (SWMU 34). Other wastes which are indigenous to the secondary lead smelting process (i.e., lead dross, used protective clothing, spent refractory brick, waste water treatment filter cake, baghouse dust (K069) and floor sweepings are also smelted in the furnace (LDEQ, 1997).

Hot gases from the furnaces are cooled and directed through settling chambers and baghouses before being released into the atmosphere. The particulate collected is a listed hazardous waste (K069) which contains lead, chromium, and cadmium, and is re-routed to the smelting furnaces through a closed-loop system using a screw auger (A.T. Kearney, 1987). Other hazardous wastes that are generated on-site include spent parts washer solvent (D001/D039), blast furnace slag (D006/D008), and spent refractory brick and leachate (D037) from the closed hazardous waste landfills (SWMUs 32 and 33). The parts washers are serviced by Safety-Kleen Corp. The blast

furnace slag is either recharged to the furnace or mixed with a pozzolanic and proprietary material to fixate and stabilize the slag. This stabilization process takes place at the Blast Furnace Slag Stabilization Unit. The fixated slag is sampled and analyzed for toxicity characteristic leaching procedure (TCLP) metals on a quarterly basis. According to the LDEQ 1997 CEI Report, this waste stream has never failed the TCLP test. Approximately 17,000 tons per year of the fixated slag is landfilled on-site in a solid waste landfill. Leachate from the closed Slag Landfills leachate collection systems is treated in the waste water treatment system and subsequently discharged through the NPDES permitted outfall to Bayou Baton Rouge. A sample of this wastewater is tested annually for lead, cadmium, antimony, arsenic, zinc, chlorides, sulfates, and pH (LDEQ, 1997).

The facility operates a waste water treatment facility (WWTF). The present system consists of a process water treatment tank (SWMU 50), a storm water tank (SWMU 51), four flocculating tanks (SWMUs 41-44), a mixing tank (SWMU 45), plate clarifier (SWMU 46), a recycle tank (SWMU 47), a filter press (SWMU 48), and Treatment Pond No. 3 (SWMU 52). The waste water treatment system was upgraded in 1986. The entire WWTF is concreted for storm water collection, and the treated water is discharged into Bayou Baton Rouge through an NPDES permit. Any solids collected from the filter press are recycled back to the furnaces (LDEQ, 1997).

Characteristics of Physical Setting

SMC is located in a region of East Baton Rouge Parish characterized by humid, subtropical climate with an above-average annual rainfall of 55 inches. With the exception of September and October, every month accumulates more than four inches of rainfall. The region is characterized by hot, humid summers and mild winters. The average summer temperature is above 90° F, but temperatures above 100° F are rare. Winters have approximately 16 days each year where the minimum temperature reaches 32° F or lower. The prevailing winds come from the Gulf of Mexico (south and southeast) at an average speed of 8 miles per hour (A.T. Kearney, 1987).

The facility is bordered on the north and west by Bayou Baton Rouge. At least part of the facility is located within the 100-year floodplain of the bayou. The highest flood level is reportedly above the level of the NPDES discharge and Treatment Pond No. 3 (SWMU 52). The toes of the closed Slag Waste Landfills (SWMUs 32-33) are also subject to flooding. The bayou and its tributaries drain the surrounding land to the Mississippi River which is located one mile west of the facility. Any unpaved portion of the facility drains to Bayou Baton Rouge. Storm water on the paved portion of the site is directed to the waste water collection and drainage system. The only other occurrence of surface water near the plant is Devils Swamp located one mile south of the facility (A.T. Kearney, 1987).

The facility is located in the Mississippi Floodplain physiographic region and is characterized by low natural levees, narrow depressions which form channels, and broad, swampy depressions.

The majority of the plant site is relatively flat with the exception of the north and west edges. Surface elevation is typically 75-80 feet above mean sea level (msl), with the western and northern boundaries sloping down to 35 feet msl (A.T. Kearney, 1987).

SMC is situated on the Pleistocene Prairie Terrace Formation. The Prairie Terrace is comprised of a thin mantle of stiff clay. At depths greater than 50 feet, the clay is interbedded with sand layers. The basal unit is composed of medium to coarse sands mixed with gravel. The formation ranges from zero to 500 feet and dips gently to the south at a rate of one foot per mile. Permeability tests were performed on soil samples collected from observation well borings from depths of four to 35 feet. Results of these tests indicated that permeability within the basal unit averages 3×10^{-8} cm/sec (A.T. Kearney, 1987).

The prevalent formation below the Prairie Terrace is the Citronelle. The Pliocene Citronelle Formation is basically sand and gravel and occurs to a depth of 1800 feet below ground surface (bgs). The Baton Rouge Fault is located approximately ten miles south of the site, and there are no active faults within 1000 feet of the facility.

Two soil types are present at the SMC site. The eastern end of the site is underlain by soils of the Oliver series and the western end by soils of the Terrace Escarpment. The Oliver series soils are poorly drained, slowly permeable acidic soils that form in loess-like material. The surface layer is generally a silt loam, while the subsoil layer is silty clay loam. Soils of the Terrace Escarpment which occur along the Bayou Baton Rouge range from sandy loam to silty clay. The soil is acidic to strongly acidic with undetermined permeability values (A.T. Kearney, 1987).

Shallow groundwater is characteristic of the site and ranges from 2.5 feet bgs at the western end of the site to 28 feet bgs at the eastern end. The groundwater is hydraulically connected to the Bayou Baton Rouge and the Mississippi River, so the level fluctuates in response to changes in the river's stages. Localized perched water tables have been encountered during observation well drilling operations. Several deep aquifers have also been identified at the site. The "600 Foot" sand aquifer was located at a depth of approximately 60 feet bgs, the "1200 Foot" and "1500 Foot" sand aquifers were both encountered at 95 feet bgs, and the "2000 Foot" sand aquifer was encountered at 275 feet bgs (A.T. Kearney, 1987).

The land surrounding the site is predominantly industrial in use and has a limited population because the majority of the zone is in the Mississippi River Floodplain or various drainage ways leading to Bayou Baton Rouge. There are fourteen water supply wells within two miles of the plant. These include the Alsen Water Works and the Capital Water Company. According to the RFA Report, the other twelve wells are believed to be used for industrial purposes. SMC has two wells on-site which are used for process and drinking water supplies. Reportedly, all known wells within the area are installed in the deep aquifers (A.T. Kearney, 1987). The location (i.e., downgradient of the SMC facility) and depths of the water supply wells was not identified in the available file material.

III. DESCRIPTION OF SOLID WASTE MANAGEMENT UNITS, AREAS OF CONCERN AND AVAILABLE DATA

A total of 72 Solid Waste Management Units (SWMUs) were identified in the 1987 RFA Report (A.T. Kearney, 1987). The RFA Addendum identified fourteen additional SWMUs and two Areas of Concern (AOCs) (EPA Region 6, March 1993). The Post Closure Permit required that SMC conduct a RCRA Facility Investigation (RFI) for 20 of the SWMUs and two of the AOCs identified in the RFA Report and RFA Addendum (EPA Region 6, April 1993). Eighteen of the waste management units with the highest release potential, which were identified in the draft post-closure permit as requiring an RFI, are presented on Figure 1. A review of the available file material, identified a total of 40 units (38 SWMUs and 2 AOCs) for which the potential for release to environmental media was determined to be moderate to high. A brief description of SWMUs and AOCs which have been identified as having a moderate to high potential for release is presented below.

Solid Waste Management Units

SWMUs 4-9 - Lead Materials Storage Areas

Lead materials have been placed at various locations in the Operations Area during or after the plant start-up in 1969. Currently, these storage areas are located inside the covered plant area, north and south of Blast Furnace No. 2. The lead materials stored in SWMUs 4-9 consist of processed or secondary lead products that are mixed with smelting additives and added to the blast furnace. The materials consist mainly of automotive, truck, and related electrolytic batteries and battery parts, as well as lead from lined flexible hose, lead pipe, bullets, and chemical tank linings. The material is used as charge for the blast or reverberatory furnaces. The materials are piled on the floor of the plant operations area and are moved through the plant by front-end loader. The plant operation area is an open-sided building. The floors are constructed of 15-inch thick concrete and are periodically wetted to reduce airborne particulates. Lead, cadmium and chromium are the constituents of concern (A.T. Kearney, 1987).

No evidence of release was identified in the RFA Report. No information regarding sampling at these units was found in the available file information. However, the Draft Post-Closure Permit indicated that an RFI was required for these units.

SWMUs 10-11 - Blast Furnaces No. 1 and 2

The water jacketed blast furnaces are used for the lead smelting process and are located adjacent to each other near the center of the covered plant operations area. Blast Furnace No. 1 has been in operation since the start-up of the plant in 1969. Blast Furnace No. 2 replaced two reverberatory furnaces, but there is no reported date of start-up. Lead charge and smelting additives are fed to the furnaces. Slag and gases are by-products of the processes. Slag is removed through a side opening in the furnace and recycled at a later time or removed to the Slag Waste Storage Area

(SWMU 34). The furnaces are fired with sulfur petroleum coke and reach temperatures of 2,200 to 2,400° F. Each blast furnace has a daily capacity of approximately 100 tons. Gases are ducted to the baghouses. The units are underlain by a 15-inch thick concrete floor. Any runoff from the units is directed toward the waste water drainage and collection system. Constituents of potential concern from both the slag and K069 dust are lead, chromium, and cadmium (A.T. Kearney, 1987).

Slag from the blast furnaces was analyzed for leachable metals content in March, 1982. Analyses of the slag sample detected the following concentrations: barium at 1,120 µg/l; cadmium at 5.0 µg/l; and lead at 2,110 µg/l (Toxicon, 1983). One bulk sample of Blast Furnace Slag was sent to Entek Laboratories in Baton Rouge on March 29, 1990. The sample was extracted by an E.P. Toxicity procedure and the extraction analyzed for metals. The results revealed the following concentrations: barium (1,900 ug/l), chromium (10 ug/l), and lead (4,900 ug/l) (Entek, 1990).

SWMUs 12-15 - Reverbatory Furnaces Nos. 1 to 4

These units are located adjacent to Blast Furnace No. 1 near the center and east end of the covered plant operations area. These furnaces have been in operation since the plant opened in 1969. The units are used in the smelting of "soft" lead products and operate at a reduced temperature of 1,000 to 1,100° F. The reverbatory furnaces are fired by natural gas and each furnace has a daily capacity of approximately 100 tons. The by-products of the lead smelting process are lead and gaseous emissions. The slag is removed and recycled, and gaseous emissions are directed to the baghouses. The units are underlain by a 15-inch thick concrete floor. Any runoff from the units is directed toward the Waste Water Drainage and Collection System (SWMU 49) (A.T. Kearney, 1987).

No evidence of release from these SWMUs was identified in the RFA Report. No information regarding sampling at these units was found in the available file information.

SWMUs 16-17 - Dust Reverb Furnaces Nos. 5 and 6

The units are located in the southeast corner of the plant operations area next to the plant road and Baghouse No.1 (SWMU No. 18). The units are situated adjacent to each other and are utilized to recycle emission control dust (K069) collected in the baghouses. The furnaces are fired with natural gas and each furnace has a capacity of 100 tons per day. The units are underlain by a 15-inch thick concrete floor. Any runoff from the units is directed toward the Waste Water Drainage and Collection System (SWMU 49) (A.T. Kearney, 1987).

According to the 1987 RFA Report, no releases from these SWMUs were identified or observed. However, no monitoring of air releases from the unit has been conducted.

SWMUs 18-22- Baghouse Nos. 1-6

Operation of the baghouses began after the plant start-up in 1969 to collect emission control dust (K069) from the smelting process. Gases are passed through ducts and settling chambers where they are cooled to 250° F before entering the baghouse. The baghouse collects particulates before air exits to the atmosphere. The emissions control dust is recycled and remelted in the dust reverbatory furnaces. The maximum capacity for each baghouse is 110,000 cubic feet per minute and 500,000 cubic feet per minute for the total plant baghouse capacity. The baghouses are located outside on concrete pads. Any runoff is directed toward the Waste Water Drainage and Collection System (SWMU 49) (A.T. Kearney, 1987).

No evidence of release from these SWMUs was identified in the RFA Report. No information regarding sampling at these units was found in the available file information.

SWMU 25 - Contact Cooling Water Collection System

The unit is located inside the covered Plant Operations Building. The contact cooling water collection system surrounds the lead production areas where the lead is cast into ingots and billets. No physical description of the unit was found in the available file material. Water from the deep onsite groundwater wells is pumped to this area for cooling of lead. The water is then drained toward the Waste Water Drainage and Collection System (SWMU 49) and subsequently to the process water treatment system. The water may contain slag as it circulates around the kettles. Any runoff is directed to the Waste Water Drainage and Collection System (SWMU 49) (A.T. Kearney, 1987).

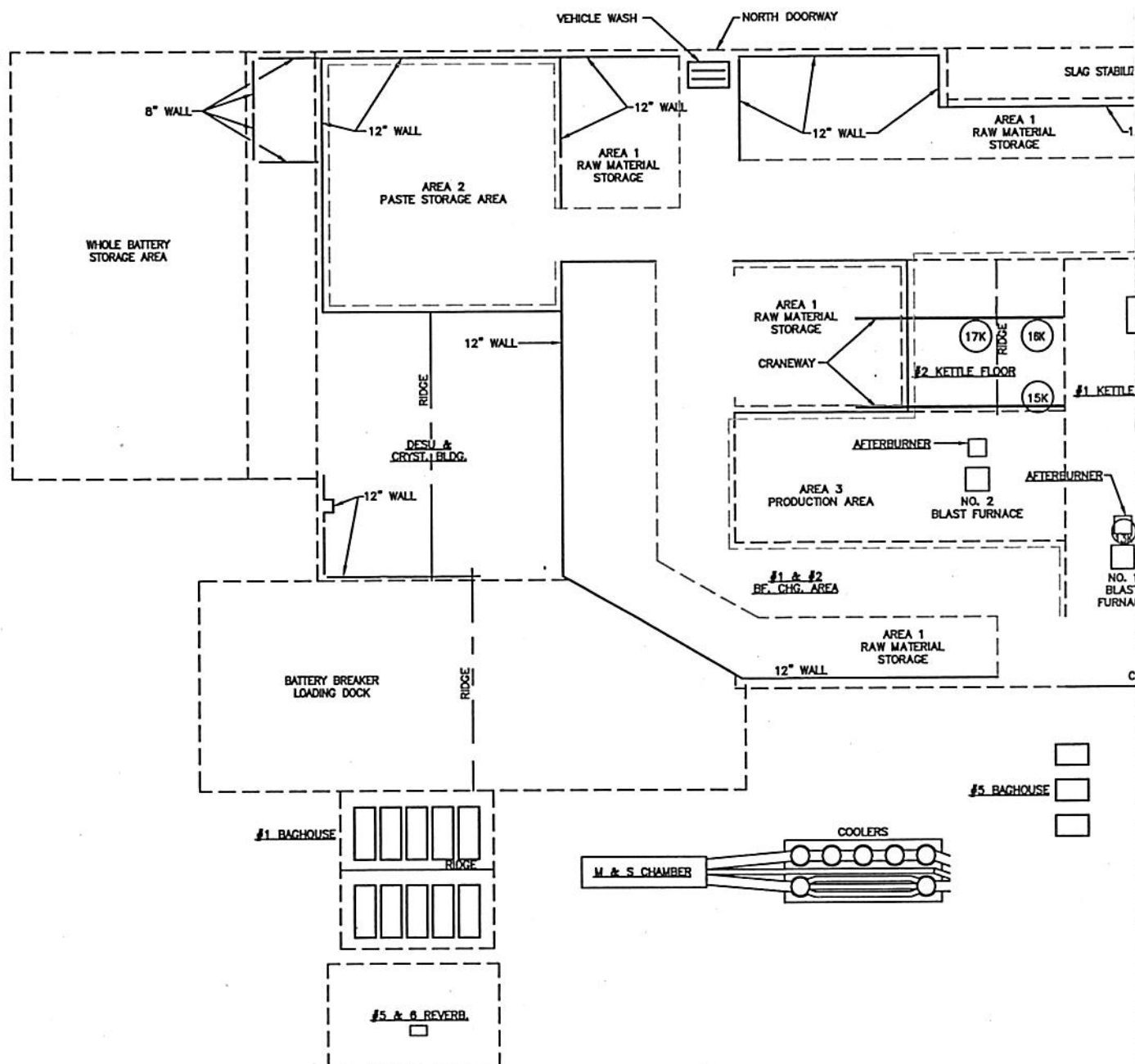
No evidence of release was identified in the RFA Report. No information regarding release controls or sampling at this unit was found in the available file information. Therefore, the potential for release of hazardous constituents is unknown.

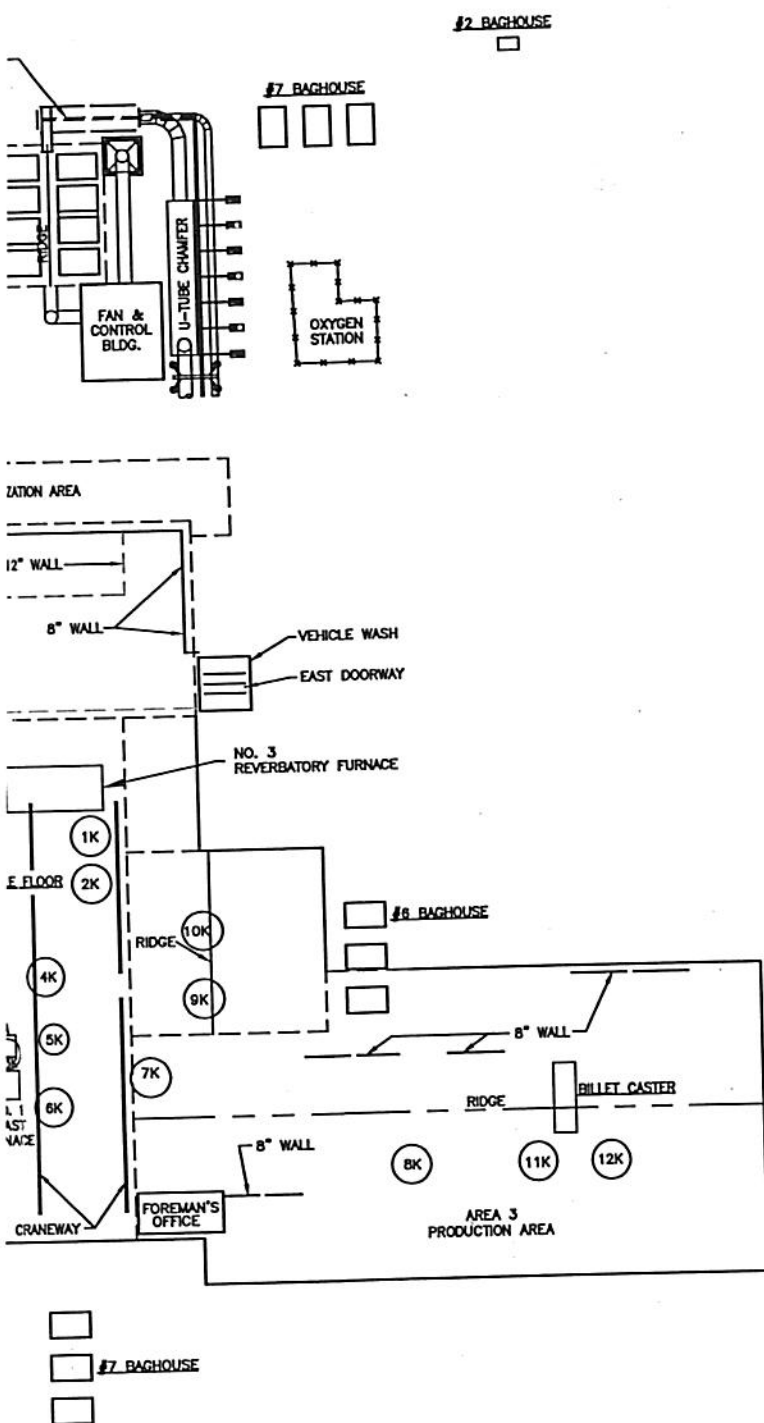
SWMUs 32-33 - Slag Waste Landfills 1 and 2

The RCRA regulated units are located on the west and south area boundaries of the facility. Slag Waste Landfill No.1 is located adjacent to Bayou Baton Rouge, and Slag Waste Landfill No.2 is located next to Brooklawn Drive. According to the RFA Evaluation Report, the units received a total of 90 acre-feet of lead slag from the smelting process and sulfuric acid from battery reclamation operations (EPA Region 6, May 1988). The units underwent closure in 1986. Slag was placed on top of an escarpment above Bayou Baton Rouge and capped with a two-foot thick layer of clay, topped with 6 inches of soil and vegetation. A leachate collection system was installed at the toe of the slope of each of the units, and is designed to collect and remove any leachate generated from the landfill units which may seep into Bayou Baton Rouge. The elevation of the bayou is occasionally above the lowest elevation at which slag is present and may cause seepage and groundwater contamination problems (A.T. Kearney, 1987).

M & S CHAMBER

#4 BAGHOUSE



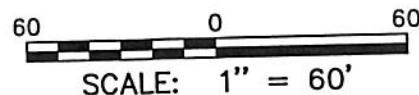


LEGEND

- AREA 1 RAW MATERIAL STORAGE AREAS
- AREA 2 PASTE STORAGE AREA
- AREA 3 PRODUCTION AREA

REFERENCE

BASE MAP PROVIDED BY EXIDE DRAWING NO. AREA MAP 4
DATED 7/22/98.



Exide Corporation
Baton Rouge, Louisiana

Hazardous Waste Containment Building Certification

Containment Building

East Baton Rouge Parish

CK
ASSOCIATES, INC
Baton Rouge, Louisiana

Drawn: LMH/ACAD
Checked: TAB
Approved: TAB
Date: 11/03/99B
Dwg. No.: B24-810-01

Figure 1

INSPECTION TARGETING SUMMARY SHEET

Exide Technologies Baton Rouge Smelter East Baton Rouge Parish, LA

Executive Summary: No emissions were reported to the LDEQ emissions inventory for this facility. Air emissions and surface water discharges for this facility have been reported in the TRI. Since 1988, 86,885 pounds of lead have been reported as emissions from this facility. This would be a good facility at which to collect soil samples from the surrounding area and analyze them for lead and arsenic. Potential surface impoundments appear in aerial views of the facility. This facility has been recently inspected by the State.

Facility Overview:

Company Name: Exide Technologies Baton Rouge Smelter **Address:** 2400 Brooklawn Drive

Alternate Names: Schuylkill Metals Corporation (NPDES)

Primary Business: Secondary smelting and refining of nonferrous metals **SIC Code:** 3341

Total Waste Managed: 23,314,619 lbs/yr **Total Air Emissions:** 3889 lbs/yr

Latitude: 30.5854 **Longitude:** -91.2438

Region 6 Facilities:

Exide Technologies operates major industrial plants within EPA Region 6. These facilities can be significant contributors to of both toxic and ozone forming VOC concentrations in a local area.

Regional Globals: Exide Corp.		
Facility	County	State
Exide Technologies Baton Rouge Smelter	East Baton Rouge	LA
Exide Corporation (Shreveport)	Caddo	LA
Exide Corporation (Fort Smith)	Sebastian	AR
Exide Corporation (Farmers Branch)	Dallas	TX
GNB Technologies Inc.	Collin	TX

Compliance History: Date of last inspection: 02/16/06 (CAA), 02/15/07 (CWA), and 04/04/07(RCRA); Quarters in noncompliance in last 12: 12 (RCRA), 12 (CWA); Formal Enforcement Actions: Final 3008A Compliance Order issued by State on 02/24/06

Inspection Focus Areas: Area identified based upon their contribution

- Lead sources
- Arsenic sources
- Arsenic and Lead Surface Water Discharges

Potential Environmental Outcomes

- Lead emission reductions
- Arsenic emission confirmation
- Surface water discharge reductions

Facility Risk Drivers:

No emissions of air toxics were reported in the LDEQ emissions inventory and therefore risk could not be calculated for this facility. The TRI did report air emissions for lead and surface water discharges for lead, arsenic, and antimony. However TRI data does not provide adequate location information to conduct risk modeling.

Facility Emissions Information:

Emissions information summarized below identifies: 1) primary emitters of criteria pollutants; 2) emission trends for risk driving chemicals of concern. Information is insufficient to provide a data gap analysis or quantify upset emissions.

Emissions Summary: Criteria Pollutants Emissions (tons/year)	
Chemical	Emissions
NO _x	14
SO _x	1050
CO	6
VOCs	0
PM 2.5	19
PM 10	23

Historic Emissions: Facility-wide TRI (lbs/year)								
Chemical	1998	1999	2000	2001	2002	2003	2004	2005
Lead	3820	2220	2620	2040	4200	3400	3889	2238

Monitoring Data Summary:

Nearest Air Monitoring Locations: 1) East Baton Rouge, LDEQ, 1071 Leesville Ave. Pollutants Monitored: Carbon Monoxide, Nitrogen Dioxide, Sulfur Dioxide, Ozone, PM-2.5, and Speciated PM2.5 (Carbon, Nitrate, Sulfate). 2) East Baton Rouge, East End of Aster Lane. Pollutants Monitored: Nitrogen Dioxide, Ozone

Facility Map-



3. Facility Processes

3.1 Engitech (Battery Breaking Process)

Spent lead-acid batteries are purchased from third party contractors through brokers, distributors, closed sites, reclamation activities, and military or other government installations. The spent lead-acid batteries are delivered to the facility in trucks or trailers and are unloaded at the Battery Breaker Desuphurization (DES) Unit unloading dock. The spent lead-acid batteries are either fed directly into the DES Unit or stored temporarily on a permitted hazardous waste storage pad. Spent lead-acid batteries begin processing in the battery breaker unit by placement in the shaker table. A conveyor carries the spent lead acid batteries to the hammer mill. The hammer mill cuts the batteries and hydraulically separates the individual components (plastic, posts, grids, grid plates, and acid). The broken plastic from battery casings is thoroughly washed to remove residual acid and lead. It is then loaded from the process onto trailers, locked, shipped off-site, and recycled for use in new battery cases. The battery acid, a weak sulfuric acid solution, is stored in two, 15,000 gallon tanks. The battery acid is neutralized with sodium hydroxide and crystallized to form sodium sulfate salt. Water is returned to reactor tanks for neutralization of water solution to recover lead. The water is continually filtered to recover lead. The lead material from the batteries is processed to convert lead sulfate to lead oxide in paste form. The lead oxide paste is then stored in Exide's permitted Containment Building prior to recycling.

3.2 Reverbaratory (Reverb) Furnace

The reverb furnace is charged with lead feed material primarily containing desulphurized battery components from the battery breaking process, non-desulphurized battery components, lead scrap, and emission control (bag house) dust. Molten lead and slag are outputs from the reverb furnace. The slag is collected in pots, allowed to cool and stored in piles for use in the blast furnace. The molten lead is refined in kettles to meet client specifications and is then cast into either ingots using two casting machines or blocks using molds. The finished lead is tested for content and loaded into trucks and transported off-site for reuse.

3.3 Blast Furnace

The blast furnace is charged with lead feed material containing reverb furnace slag, emission control dust, industrial batteries, cast iron, and coke in varying ratios. Process heat needed to melt the lead is produced by the reaction of charged coke with blast air that is blown into the furnace and natural gas consumption. Some of the coke combusts to melt the charge, while the remainder reduces lead oxides to elemental lead. Molten lead is refined in kettles to meet client specifications and is then cast into either ingots, using two casting machines, or blocks, using molds. The slag is allowed to cool, crushed to small diameter, and treated using a mixture of Portland Classic Grey Potter (cement) and sodium silicate, as specified in the Hazardous Waste Permit. A 15 percent mixture of sodium silicate and cement is added to the slag. (The mixture of cement to sodium

silicate is dependent on the consistency of the slag. The operator adjusts the flow of cement and sodium silicate for consistency of stabilizer.) After treatment, the stabilized slag is placed in a permitted, on-site Solid Waste Landfill as a non-hazardous material. The stabilized slag is tested quarterly with a toxic characteristic leaching procedure (TCLP) test. The inspector reviewed TCLP results from 2005 to the present. The results verified a 15 percent ratio of cement and silicate to slag for stabilization. Any reject is sent back to the blast furnace.

3.4 Wastewater Treatment System (WWTS)

Wastewaters (cooling and wash down water) throughout the facility are collected and hard-piped to the WWTS. The wastewater is passed through a plate frame filter process (mechanical filtration). The wastewater is then passes through a chemical co-precipitation process, clarified, and filter, media polished (sand/gravel bed filter). The treated waste water is placed in a holding tank and discharged to the bayou or used as wash down. Sludge generated by the WWTS is sent to the blast furnace feed for lead recovery.

3.5 Bag Houses

Exide utilizes five bag houses. Two of the bags houses are industrial hygiene bag houses, two production, and one dust collector. Fumes and dust are pulled into the bag houses from furnaces. Dust is collected through bags and clean air is exhausted. Residual dust is sent to either the reverb or blast furnace for lead recovery. The dust collector collects fumes/dust from the casting machine.

4. Recycled/Recovered Materials

4.1 Plastic

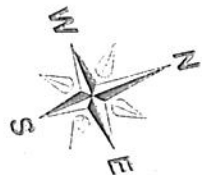
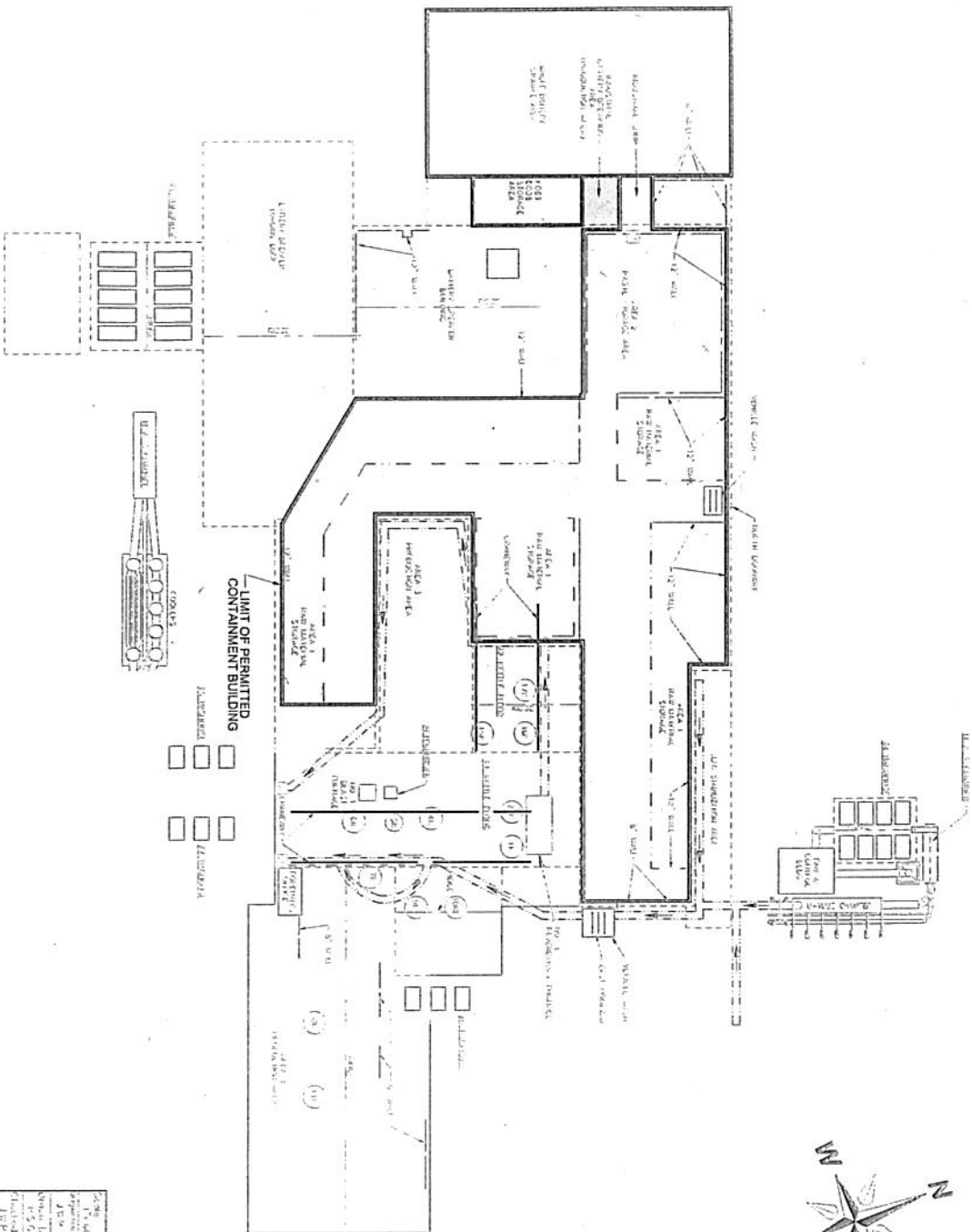
Plastic from spent lead acid battery casings is generated in the Engitech Process described above. As stated, the plastic is thoroughly washed and fed into trailers directly from the process. The plastic pieces are sent to KW Plastics in Troy, Alabama. KW Plastics melts the plastic pieces and extrudes it to be used to make new battery cases.

4.2 Acid

Acid collected from the Engitech Process is filtered and stored for reuse in the process. Solids filtered from the acid are sent to the reverb furnace.

4.3 Dry Paste

Lead Oxide is a filter press-like material that is processed out of residual water from the Engitech Process. The lead oxide is sent to the reverb furnace.



Legend

- Area 1 Hazardous Waste Storage Area
- Area 2 Hazardous Waste Storage Area
- Area 3 Production Area
- Water Collection Sump
- Water Tank
- Water Flow
- Pilot Study Area
- Industrial Containment Location

Notes:

1. Base map compiled from Exide Corporation drawing titled "Containment Building for the Hazardous Waste Containment Building Construction drawing no. 624-610-01 drawn by C&E Associates, Inc. dated 11/02/03.
2. Area 2 camp location from Providence Engineering as-built dated November 19, 2003.



EXIDE TECHNOLOGIES

BATON ROUGE, LOUISIANA

PILOT STUDY FOR INDUSTRIAL BATTERY BREAKER



Project No.	274-103-03
Project Name	PILOT STUDY FOR INDUSTRIAL BATTERY BREAKER
Client	Exide Technologies
Location	Baton Rouge, Louisiana
Date	11/19/03
Drawn by	J. H. P.
Checked by	J. H. P.
Approved by	J. H. P.

AIR PERMIT BRIEFING SHEET
AIR PERMITS DIVISION
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Baton Rouge Smelter
Agency Interest No.: 1396
Exide Technologies
Baton Rouge, East Baton Rouge Parish, Louisiana

secondary lead smelting operations based on spent lead-acid batteries and reducing airborne emissions of sulfur dioxide (and the need for downstream SO₂ emissions control). Exide completed construction of the DES unit in 1998, although process refinements are ongoing.

Spent lead-acid batteries arrive in trucks or trailers and are unloaded at the Battery Breaker Unit. From the unloading dock, the batteries are fed into a stainless steel hopper, then into a hammer mill. Alternatively, they may be stored temporarily in permitted hazardous waste storage areas. The hammer mill breaks the batteries into small pieces, and the individual components are hydraulically separated. Plastic is washed to remove the residual acid and lead, then loaded into trailers and shipped off-site for recycling. Battery acid, a weak sulfuric acid solution, is neutralized with sodium hydroxide, and the resulting salt, sodium sulfate, is crystallized, centrifugally separated, and dried. The recovered salt is sold as a commercial product.

In the DES Unit, lead paste is reacted in twin vessels with additional sodium hydroxide to convert lead sulfate to an oxide. The product is washed to remove sodium sulfate, then passed through a filter press. The filtrate and wash solution are treated as before to recover sodium sulfate. Filter cake, consisting of desulfurized lead compound (mostly lead oxide), is stored in a totally enclosed containment building prior to smelting.

Sweating, Smelting, and Refining

Sweating is the operation by which metallic lead is separated from a stream containing other metals with higher melting points. Metallic components, including battery terminals, clamps, internal and external connectors, are charged into a furnace and heated to just above the relatively low melting temperature of lead. The molten lead is tapped, while the contaminants, mostly steel and other ferrous metals, remain behind.

Smelting is the process by which metallic lead is produced from lead compounds and separated from the non-metallic contaminant. To smelt lead-bearing materials, i.e. to reduce lead compounds to metallic form, Exide currently operates one blast and one reverberatory furnace, the No. 1 Blast Furnace and the No. 3 Reverberatory Furnace, respectively. The No. 3 Reverberatory Furnace is charged with lead feed primarily containing desulfurized battery components, non-desulfurized battery components, lead scrap, and emission control dust. The No. 1 Blast Furnace is charged with lead feed material containing reverberatory furnace slag, drosses, lead scrap, emission control dust, desulfurized battery components, non-desulfurized battery components, and coke.

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For both furnaces, the energy required to heat and melt the charge is produced by the combustion of natural gas. The No.1 Blast Furnace also uses coke as an energy source. The minimum temperature for smelting in the blast furnace is 980°C, and a controlled amount of combustion air is injected to the bottom of the furnace. At these conditions, some of the coke combusts to help melt the charge, while the remainder reduces lead oxides to elemental lead. In the reverberatory furnace, only a relatively minor amount of coke is used as a reducing agent. It is primarily the high temperature of the refractory lined furnace, over 1200°F, in an oxygen deficient environment that is sufficient to reduce lead to metallic form.

To meet customer specifications, the molten lead is further refined and/or alloyed in large heated kettles, then cast into either ingots using casting machines or into blocks using molds. The finished lead is tested for content, then transported off-site.

As a part of this lead recycling operation, blast furnace slag is generated. This slag is not recycled, as is reverberatory furnace slag, but allowed to cool, crushed to small diameter, and vitrified using a mixture of cement and sodium silicate as specified in the Baton Rouge Smelter's Hazardous Waste Permit. After treatment, the slag is placed in a permitted onsite solid waste landfill.

Emission Controls

In 40 CFR 63 Section 63.542, EPA defines several sources of particulate and lead emissions from secondary lead smelters and mandates treatment standards for each class. Primary process emissions represent the primary process exhaust stream from a smelting furnace. Process fugitive emissions are those emissions associated with lead smelting and refining that are not primary process emissions. Section 63.544 (a)(1)-(6) lists the kinds of process fugitive emission points that must be controlled. At the Baton Rouge Smelter, most process fugitive emissions from the furnaces occur when the furnace taps are opened to discharge molten lead and molten slag. Process fugitive emissions also occur in the casting and refining area. To comply with the above NESHAP, all primary process and process fugitives from a secondary smelter must be treated.

To control primary process and process fugitive emissions from the smelting, refining, and desulfurization units, Exide operates six fabric filter baghouses equipped with filter bags rated 99.9% efficient and with mechanical bag shakers. The Inventories Section of this permit identifies each baghouse and defines the control relationship with the furnaces and other emission points. Collection devices (fume hoods) are used to collect the process fugitive emissions in the furnace and refining/casting areas and route these emissions to the

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baghouses. In addition, particulate and sulfuric acid emissions from the DES Unit are controlled by scrubbing using a water solution.

Recognized sources of fugitive dust from a secondary smelter include the following:

1. Plant roadways
2. Battery breaking area
3. Furnace area
4. Refining and casting area
5. Material storage and handling area

Mechanical sweepers collect fugitive dust from the plant roadways and other open areas on a daily basis. Fugitive dust from the other areas is contained as much as possible. The No.1 Containment Building prevents fugitive emissions from the material handling and storage areas, the furnace area, and the casting and refining areas. A separate containment building, the Battery Breaker Building, contains fugitive emissions from the Battery Breaker Unit. These containment buildings are partially enclosed and pavement cleaning twice per day.

The original Title V application was intended to comply with the Louisiana Part 70 Operating Permit regulations. Emission changes associated with that submittal resulted from changes in emission factors, methodology, reconciliation, and shifts in production.

With the current request, Exide requests the following modifications:

- A cap for operational flexibility for two furnaces, EQT 2 and EQT 5. The requested cap is based on an annual production rate of 100,000 tons of finished lead between the two furnaces.
- The No. 2 Blast Furnace and Nos. 5 and 6 Reverberatory Furnaces were removed from service in 1999. The Battery Plate Dryer and Kettle Nos. 1, 11, 12, 13, and 14 were also removed from service during the mid to late nineties.

The above changes in production do not constitute a major modification or change in the method of operation.

SPECIFIC REQUIREMENTS

AI ID: 1396 - Exide Technologies - Baton Rouge Smelter

Activity Number: PER20060002

Permit Number: 0840-00004-V0

Air - Title V Regular Permit Admin Amendment

EQT002 93-1A Blast Furnace No. 1 with Baghouse No. 1

- 1 Prevent particulate matter from becoming airborne by taking all reasonable precautions. These precautions shall include, but not be limited to, those specified in LAC 33:III.1305.1-7. [LAC 33:III.1305]
- 2 Total suspended particulate ≤ 9.81 lb/hr. The rate of emission shall be the total of all emission points from the source (subsumed by 40 CFR 63.543). [LAC 33:III.1311.B]
Which Months: All Year Statistical Basis: None specified
- 3 Sulfur dioxide ≤ 2000 ppmv at standard conditions. [LAC 33:III.1503.C]
Which Months: All Year Statistical Basis: Three-hour average
- 4 Determine sulfur dioxide and sulfuric acid mist concentrations in stack gases using the methods in LAC 33:III.1503.D Table 4. Use these methods for initial compliance determinations and for additional compliance determinations for those facilities not subject to continuous emission monitoring. [LAC 33:III.1503.D.1]
- 5 Submit report: Due annually, by the 31st of March, in accordance with LAC 33:III.918. Report data required to demonstrate compliance with the provisions of LAC 33:III.Chapter 15. [LAC 33:III.1513]
- 6 Submit quarterly reports of three-hour excess emissions and prompt reports of emergency occurrences, in accordance with LAC 33:III.927. [LAC 33:III.1513]
- 7 Concentration of Sulfur dioxide recordkeeping by electronic or hard copy at the regulation's specified frequency. Record and keep on site for at least two years the data required to demonstrate compliance with the provisions of LAC 33:III.Chapter 15. Record all emissions data in the units of the standard using the averaging time of the standard. Source is exempt from CEMS requirements. Make records available to a representative of DEQ or the U.S. EPA on request. [LAC 33:III.1513]
- 8 Filter vents: Visible emissions monitored by visual inspection/determination daily. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: None specified
- 9 Filter vents: Visible emissions recordkeeping by electronic or hard copy daily. Keep records of visual checks on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. [LAC 33:III.501.C.6]
- 10 Filter elements (bags): Equipment/operational data monitored by technically sound method once every six months or whenever visual checks indicate maintenance may be necessary. Change elements as necessary. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: None specified
- 11 Filter elements (bags): Equipment/operational data recordkeeping by electronic or hard copy upon each occurrence of inspection. Keep records of maintenance inspections on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. [LAC 33:III.501.C.6]
- 12 Particulate matter (10 microns or less) $\geq 99.9\%$ removal efficiency. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: None specified
- 13 Permittee shall limit the sulfur content of the blast furnace coke to 0.6% sulfur. Records for the sulfur content of the coke purchased shall be maintained on site and available for inspection by DEQ personnel. [LAC 33:III.501.C.6]
- 14 On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, the permittee shall not discharge gases from the affected source into the atmosphere gases which: (1) contain particulate matter in excess of 50 mg/DSCM (0.022 grain/DSCF), and (2) exhibit 20 percent opacity or greater. [40 CFR 60.122(a)]
- 15 Determine compliance with the particulate matter standards in 60.122 as described in 60.123. [40 CFR 63.123]
- 16 Permittee shall not discharge to the atmosphere process exhaust gases that contain Lead compounds ≥ 2 mg/DSCM (0.00087 grains per dry standard cubic foot). [40 CFR 63.543(a)]
Which Months: All Year Statistical Basis: None specified
- 17 Permittee shall not discharge to the atmosphere from any existing blast furnace any gases that contain Total hydrocarbon ≥ 360 ppmv (dry basis) expressed as propane corrected to 4% carbon dioxide. [40 CFR 63.543(c)]
Which Months: All Year Statistical Basis: Three-hour average
- 18 Lead compounds monitored by stack emission testing annually. The following methods in Appendix A of Part 60 shall be used to determine compliance with the emission standard for lead compounds: Methods 1-4 and 12. [40 CFR 63.543(h)]
Which Months: All Year Statistical Basis: Annual maximum

SPECIFIC REQUIREMENTS

AI ID: 1396 - Exide Technologies - Baton Rouge Smelter

Activity Number: PER20060002

Permit Number: 0840-00004-V0

Air - Title V Regular Permit Admin Amendment

EQT002 93-1A Blast Furnace No. 1 with Baghouse No. 1

- 19 If a compliance test demonstrates a source emitted lead compounds ≤ 1.0 mg lead/DSCM (0.0004 grain/DSCF) during the time of the compliance test, the permittee shall be allowed up to 24 calendar months from the previous compliance test to conduct the next compliance test for lead compounds. [40 CFR 63.543(i)]
- 20 Control fugitive dust from the furnace area with a partial enclosure and pavement cleaning twice per day, or total enclosure with ventilation to a control device. [40 CFR 63.545(c)(3)]
- 21 Control fugitive dust from the refining and casting areas with a partial enclosure twice per day, or total enclosure with ventilation to a control device. [40 CFR 63.545(c)(4)]
- 22 The test methods specified in 63.547 shall be used to determine compliance with the emission limitations in 63.543, 63.544, and 63.545. [40 CFR 63.547]
- 23 Permittee shall devise and operate according to a standard operating manual that describes in detail procedures for furnace and control-device operation, inspection, maintenance, and a bag leak detection and corrective action plan as detailed in 63.548(c). This standard operating procedure manual shall be kept onsite and a copy of which shall be sent to the Administrator or his delegated authority for review and approval. [40 CFR 63.548(a)]
- 24 Total hydrocarbon monitored by continuous emission monitor (CEM) continuously. Permittee may also achieve compliance with the total hydrocarbon emission standard of this section by installing a continuous temperature monitor that meets the requirements of 63.548(j)(1). [40 CFR 63.548(j)]
- Which Months: All Year Statistical Basis: Three-hour average
- 25 Permittee shall comply with the notification requirements of 63.549. [40 CFR 63.549]
- 26 The permittee shall maintain all records and provide written reports as required to determine compliance with the emission limitations in 63.543, 63.544, and 63.545, and with the monitoring requirements of 63.548, in accordance with the recordkeeping of 63.550(a) and reporting requirements of 63.550(b) and (c). [40 CFR 63.550]

EQT005 93-2A Reverberatory Furnace No. 3 with Baghouse No. 4

- 27 Prevent particulate matter from becoming airborne by taking all reasonable precautions. These precautions shall include, but not be limited to, those specified in LAC 33:III.1305.1-7. [LAC 33:III.1305]
- 28 Total suspended particulate ≤ 17.30 lb/hr. The rate of emission shall be the total of all emission points from the source (subsumed by 40 CFR 63.543). [LAC 33:III.1311.B]
- Which Months: All Year Statistical Basis: None specified
- 29 Sulfur dioxide ≤ 2000 ppmv at standard conditions. [LAC 33:III.1503.C]
- Which Months: All Year Statistical Basis: Three-hour average
- 30 Determine sulfur dioxide and sulfuric acid mist concentrations in stack gases using the methods in LAC 33:III.1503.D. Table 4. Use these methods for initial compliance determinations and for additional compliance determinations for those facilities not subject to continuous emission monitoring. [LAC 33:III.1503.D.1]
- 31 Submit report: Due annually, by the 31st of March, in accordance with LAC 33:III.918. Report data required to demonstrate compliance with the provisions of LAC 33:III. Chapter 15. [LAC 33:III.1513]
- 32 Submit quarterly reports of three-hour excess emissions and prompt reports of emergency occurrences, in accordance with LAC 33:III.927. [LAC 33:III.1513]
- 33 Concentration of Sulfur dioxide recordkeeping by electronic or hard copy at the regulation's specified frequency. Record and keep on site for at least two years the data required to demonstrate compliance with the provisions of LAC 33:III. Chapter 15. Record all emissions data in the units of the standard using the averaging time of the standard. Source is exempt from CEMS requirements. Make records available to a representative of DEQ or the U.S. EPA on request. [LAC 33:III.1513]
- 34 If a compliance test demonstrates a source emitted lead compounds ≤ 1.0 mg lead/DSCM (0.0004 grain/DSCF) during the time of the compliance test, the permittee shall be allowed up to 24 calendar months from the previous compliance test to conduct the next compliance test for lead compounds. [LAC 33:III.1513]
- 35 Filter vents: Visible emissions monitored by visual inspection/determination daily. [LAC 33:III.501.C.6]
- Which Months: All Year Statistical Basis: None specified
- 36 Filter vents: Visible emissions recordkeeping by electronic or hard copy daily. Keep records of visual checks on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. [LAC 33:III.501.C.6]

SPECIFIC REQUIREMENTS

AI ID: 1396 - Exide Technologies - Baton Rouge Smelter

Activity Number: PER20060002

Permit Number: 0840-00004-V0

Air - Title V Regular Permit Admin Amendment

EQT005 93-2A Reverberatory Furnace No. 3 with Baghouse No. 4

- 37 Filter elements (bags): Equipment/operational data monitored by technically sound method once every six months or whenever visual checks indicate maintenance may be necessary. Change elements as necessary. [LAC 33:III.501.C.6]
- Which Months: All Year Statistical Basis: None specified
- 38 Filter elements (bags): Equipment/operational data recordkeeping by electronic or hard copy upon each occurrence of inspection. Keep records of maintenance inspections on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. [LAC 33:III.501.C.6]
- 39 Particulate matter (10 microns or less) $\geq 99.9\%$ removal efficiency. [LAC 33:III.501.C.6]
- Which Months: All Year Statistical Basis: None specified
- 40 Permittee shall comply with the notification requirements of 63.549. [LAC 33:III.549]
- 41 On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, the permittee shall not discharge gases from the affected source into the atmosphere gases which: (1) contain particulate matter in excess of 50 mg/DSCM (0.022 grain/DSCF), and (2) exhibit 20 percent opacity or greater. [40 CFR 60.122]
- 42 Determine compliance with the particulate matter standards in 60.122 as described in 60.123. [40 CFR 60.123]
- 43 Determine compliance with the particulate matter standards in 60.122 as described in 60.123. [40 CFR 60.123]
- 44 Lead compounds monitored by stack emission testing annually. The following methods in Appendix A of Part 60 shall be used to determine compliance with the emission standard for lead compounds: Methods 1-4 and 12. [40 CFR 63.543(h)]
- Which Months: All Year Statistical Basis: Annual maximum
- 45 Control fugitive dust from the furnace area with a partial enclosure and pavement cleaning twice per day, or total enclosure with ventilation to a control device. [40 CFR 63.545(c)(3)]
- 46 Control fugitive dust from the furnace area with a partial enclosure and pavement cleaning twice per day, or total enclosure with ventilation to a control device. [40 CFR 63.545(c)(3)]
- 47 The test methods specified in 63.547 shall be used to determine compliance with the emission limitations in 63.543, 63.544, and 63.545. [40 CFR 63.547]
- 48 Permittee shall devise and operate according to a standard operating manual that describes in detail procedures for furnace and control device operation, inspection, maintenance, bag leak detection, and corrective action, as detailed in 63.548(c). This standard operating procedure manual shall be kept onsite and a copy of which shall be sent to the Administrator or his delegated authority for review and approval. [40 CFR 63.548(a)]

EQT007 93-3A Blast Furnace No. 1 Fugitives with Baghouse No. 5

- 49 Lead compounds ≤ 0.04 lb/hr. [LAC 33:III.501.C.6]
- Which Months: All Year Statistical Basis: Annual maximum
- 50 Determine compliance with the particulate matter standards in 60.122 as described in 60.123. [40 CFR 60.123]
- 51 Determine compliance with the particulate matter standards in 60.122 as described in 60.123. [40 CFR 60.123]
- 52 Process Fugitive Enclosure Hoods: Enclosed Hood Face Velocity ≥ 1.5 m/s at all hood openings. [40 CFR 63.544(b)(1), 40 CFR 63.544(b)(3)]
- Which Months: All Year Statistical Basis: Instantaneous minimum
- 53 Control fugitive dust from the furnace area with a partial enclosure and pavement cleaning twice per day, or total enclosure with ventilation to a control device. [40 CFR 63.545(c)(3)]

EQT008 93-4 No. 6 Baghouse

- 54 Prevent particulate matter from becoming airborne by taking all reasonable precautions. These precautions shall include, but not be limited to, those specified in LAC 33:III.1305.1-7. [LAC 33:III.1305]

SPECIFIC REQUIREMENTS

AI ID: 1396 - Exide Technologies - Baton Rouge Smelter

Activity Number: PER20060002

Permit Number: 0840-00004-V0

Air - Title V Regular Permit Admin Amendment

EQT008 93-4 No. 6 Baghouse

- 55 Filter vents: Visible emissions monitored by visual inspection/determination daily. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: None specified
- 56 Filter vents: Visible emissions recordkeeping by electronic or hard copy daily. Keep records of visual checks on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. [LAC 33:III.501.C.6]
- 57 Filter elements (bags): Equipment/operational data monitored by technically sound method once every six months or whenever visual checks indicate maintenance may be necessary. Change elements as necessary. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: None specified
- 58 Filter elements (bags): Equipment/operational data recordkeeping by electronic or hard copy upon each occurrence of inspection. Keep records of maintenance inspections on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. [LAC 33:III.501.C.6]
- 59 Particulate matter (10 microns or less) $\geq 99.9\%$ removal efficiency. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: None specified
- 60 On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, the permittee shall not discharge gases from the affected source into the atmosphere gases which: (1) contain particulate matter in excess of 50 mg/DSCM (0.022 grain/DSCF), and (2) exhibit 20 percent opacity or greater. [40 CFR 60.122]
- 61 Determine compliance with the particulate matter standards in 60.122 as described in 60.123. [40 CFR 60.123]
- 62 Permittee shall not discharge to the atmosphere process exhaust gases that contain Lead compounds ≥ 2 mg/DSCM (0.00087 grains per dry standard cubic foot). [40 CFR 63.544(c)]
Which Months: All Year Statistical Basis: Annual maximum
- 63 The test methods specified in 63.547 shall be used to determine compliance with the emission limitations in 63.543, 63.544, and 63.545. [40 CFR 63.547]
- 64 Permittee shall devise and operate according to a standard operating manual that describes in detail procedures for furnace and control device operation, inspection, maintenance, bag leak detection, and corrective action, as detailed in 63.548(c). This standard operating procedure manual shall be kept onsite and a copy of which shall be sent to the Administrator or his delegated authority for review and approval. [40 CFR 63.548(a)]
- 65 Permittee shall comply with the notification requirements of 63.549. [40 CFR 63.549]

EQT009 93-4A Reverberatory Furnace No. 3-Process Fugitive Emissions

- 66 Prevent particulate matter from becoming airborne by taking all reasonable precautions. These precautions shall include, but not be limited to, those specified in LAC 33:III.1305.1-7. [LAC 33:III.1305]
- 67 Total suspended particulate ≤ 9.81 lb/hr. The rate of emission shall be the total of all emission points from the source (subsumed by 40 CFR 63.543). [LAC 33:III.1311.B]
Which Months: All Year Statistical Basis: None specified
- 68 Determine compliance with the particulate matter standards in 60.122 as described in 60.123. [40 CFR 60.123]
- 69 Process Fugitive Emissions Capture Device: Enclosed Hood Face Velocity ≥ 1.5 m/s. [40 CFR 63.544(b)(1)]
Which Months: All Year Statistical Basis: Instantaneous minimum

EQT023 93-7 Gasoline Tank

- 70 Equip with a submerged fill pipe. [LAC 33:III.2103.A]
- 71 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e. [LAC 33:III.2103.H.3]
- 72 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable. [LAC 33:III.2103.J]

SPECIFIC REQUIREMENTS

AI ID: 1396 - Exide Technologies - Baton Rouge Smelter

Activity Number: PER20060002

Permit Number: 0840-00004-V0

Air - Title V Regular Permit Admin Amendment

EQT024 93-11 Cement Silo No. 1

73 Total suspended particulate \leq 7.58 lb/hr. The rate of emission shall be the total of all emission points from the source. [LAC 33:III.1311.B]
Which Months: All Year Statistical Basis: None specified

74 Opacity \leq 20 percent; except emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. [LAC 33:III.1311.C]
Which Months: All Year Statistical Basis: Six-minute average

EQT028 95-1 DES Unit Boiler

75 Total suspended particulate \leq 0.6 lb/MMBTU of heat input (Complies by using sweet natural gas as fuel). [LAC 33:III.1313.C]

Which Months: All Year Statistical Basis: None specified

76 Equipment/operational data recordkeeping by electronic or hard copy continuously. Record and keep on site for at least two years the data required to demonstrate exemption from the provisions of LAC 33:III.Chapter 15. Record all emissions data in the units of the standard using the averaging time of the standard. Make records available to a representative of DEQ or the U.S. EPA on request. [LAC 33:III.1513]

EQT029 95-2 DES Unit Baghouse

77 Prevent particulate matter from becoming airborne by taking all reasonable precautions. These precautions shall include, but not be limited to, those specified in LAC 33:III.1305.1-7. [LAC 33:III.1305]

78 Equipment/operational data recordkeeping by electronic or hard copy continuously. Record and keep on site for at least two years the data required to demonstrate exemption from the provisions of LAC 33:III.Chapter 15. Record all emissions data in the units of the standard using the averaging time of the standard. Make records available to a representative of DEQ or the U.S. EPA on request. [LAC 33:III.1513]

79 Filter vents: Visible emissions monitored by visual inspection/determination daily. [LAC 33:III.501.C.6]

Which Months: All Year Statistical Basis: None specified

80 Filter vents: Visible emissions recordkeeping by electronic or hard copy daily. Keep records of visual checks on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. [LAC 33:III.501.C.6]

81 Filter elements (bags): Equipment/operational data monitored by technically sound method once every six months or whenever visual checks indicate maintenance may be necessary. Change elements as necessary. [LAC 33:III.501.C.6]

Which Months: All Year Statistical Basis: None specified

82 Filter elements (bags): Equipment/operational data recordkeeping by electronic or hard copy upon each occurrence of inspection. Keep records of maintenance inspections on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. [LAC 33:III.501.C.6]

83 Particulate matter (10 microns or less) \geq 99.9 % removal efficiency. [LAC 33:III.501.C.6]

Which Months: All Year Statistical Basis: None specified

EQT030 95-2A DES Unit Heater

84 Total suspended particulate \leq 0.6 lb/MMBTU of heat input (Complies by using sweet natural gas as fuel). [LAC 33:III.1313.C]

Which Months: All Year Statistical Basis: None specified

EQT032 95-3 DES Unit Gas Scrubber

85 Flow rate monitored by flow rate monitoring device once every four hours. [LAC 33:III.501.C.6]

Which Months: All Year Statistical Basis: None specified

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EQT032 95-3 DES Unit Gas Scrubber

- 86 Flow rate recordkeeping by electronic or hard copy once every four hours. [LAC 33:III.501.C.6]
- 87 Submit report: Due annually, by the 31st of March for the preceding calendar year. List the hours that the scrubber operated out of the ranges specified. Submit report to the Office of Environmental Compliance, Enforcement Division. [LAC 33:III.501.C.6]
- 88 Flow rate ≥ 150 gallons/min. [LAC 33:III.501.C.6]
- Which Months: All Year Statistical Basis: None specified

EQT033 97-1 No. 7 Baghouse

- 89 Prevent particulate matter from becoming airborne by taking all reasonable precautions. These precautions shall include, but not be limited to, those specified in LAC 33:III.1305.1-7. [LAC 33:III.1305]
- 90 Equipment/operational data recordkeeping by electronic or hard copy continuously. Record and keep on site for at least two years the data required to demonstrate exemption from the provisions of LAC 33:III.Chapter 15. Record all emissions data in the units of the standard using the averaging time of the standard. Make records available to a representative of DEQ or the U.S. EPA on request. [LAC 33:III.1513]
- 91 Filter vents: Visible emissions monitored by visual inspection/determination daily. [LAC 33:III.501.C.6]
- Which Months: All Year Statistical Basis: None specified
- 92 Filter vents: Visible emissions recordkeeping by electronic or hard copy daily. Keep records of visual checks on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. [LAC 33:III.501.C.6]
- 93 Filter elements (bags): Equipment/operational data monitored by technically sound method once every six months or whenever visual checks indicate maintenance may be necessary. Change elements as necessary. [LAC 33:III.501.C.6]
- Which Months: All Year Statistical Basis: None specified
- 94 Filter elements (bags): Equipment/operational data recordkeeping by electronic or hard copy upon each occurrence of inspection. Keep records of maintenance inspections on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. [LAC 33:III.501.C.6]
- 95 Particulate matter (10 microns or less) $\geq 99.9\%$ removal efficiency. [LAC 33:III.501.C.6]
- Which Months: All Year Statistical Basis: None specified
- 96 On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, the permittee shall not discharge gases from the affected source into the atmosphere gases which: (1) contain particulate matter in excess of 50 mg/DSCM (0.022 grain/DSCF), and (2) exhibit 20 percent opacity or greater. [40 CFR 60.122]
- 97 Determine compliance with the particulate matter standards in 60.122 as described in 60.123. [40 CFR 60.123]
- 98 All process fugitive enclosure hoods required for refining kettles in paragraph (a) of Section 63.544 shall be ventilated to maintain a face velocity of at least 75 meters per minute (250 feet per minute). [40 CFR 63.544(b)(2)]
- 99 The test methods specified in 63.547 shall be used to determine compliance with the emission limitations in 63.543, 63.544, and 63.545. [40 CFR 63.547]
- 100 Permittee shall devise and operate according to a standard operating manual that describes in detail procedures for furnace and control device operation, inspection, maintenance, bag leak detection, and corrective action, as detailed in 63.548(c). This standard operating procedure manual shall be kept onsite and a copy of which shall be sent to the Administrator or his delegated authority for review and approval. [40 CFR 63.548(a)]
- 101 Permittee shall comply with the notification requirements of 63.549. [40 CFR 63.549]

FUG001 95-4 Fugitive Emissions-Plant Roadways

- 102 Prevent particulate matter from becoming airborne by taking all reasonable precautions. These precautions shall include, but not be limited to, those specified in LAC 33:III.1305.1-7. [LAC 33:III.1305]

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UG001 **95-4 Fugitive Emissions-Plant Roadways**

103 Permittee shall devise and operate according to a standard operating manual that describes in detail procedures for controlling fugitive dust emissions within the area. These procedures shall at minimum include the requirements of (c)(1) of Section 63.545. This standard operating procedure manual shall be kept onsite and a copy of which shall be sent to the Administrator or his delegated authority for review and approval. [40 CFR 63.545]

GRP002 **Refining and Casting Kettle Heaters, EQT11-EQT22 (93-5A through 93-5L)**

104 Prevent particulate matter from becoming airborne by taking all reasonable precautions. These precautions shall include, but not be limited to, those specified in LAC 33:III.1305.1-7. [LAC 33:III.1305]

105 Total suspended particulate \leq 0.6 lb/MMBTU of heat input (Complies by using sweet natural gas as fuel). [LAC 33:III.1313.C]

Which Months: All Year Statistical Basis: None specified

106 Equipment/operational data recordkeeping by electronic or hard copy continuously. Record and keep on site for at least two years the data required to demonstrate exemption from the provisions of LAC 33:III.Chapter 15. Record all emissions data in the units of the standard using the averaging time of the standard. Make records available to a representative of DEQ or the U.S. EPA on request. [LAC 33:III.1513]

GRP003 **EQT10, EQT34-EQT44, Kettles Nos. 3, 1, 4-10, 15, 16, and 17 (93-4B, 97-1A through 97-1K)**

107 Total suspended particulate \leq 23.48 lb/hr. The rate of emission shall be the total of all emission points from the source (Superseded by 40 CFR 60 Subpart L). [LAC 33:III.1311.B]

Which Months: All Year Statistical Basis: None specified

108 All process fugitive enclosure hoods required for refining kettles in paragraph (a) of Section 63.544 shall be ventilated to maintain a face velocity of at least 75 meters per minute (250 feet per minute). [40 CFR 63.544(b)(2)]

GRP006

109 Emissions of smoke which pass onto or across a public road and create a traffic hazard by impairment of visibility as defined in LAC 33:III.111 or intensify an existing traffic hazard condition are prohibited. [LAC 33:III.1103]

110 Outdoor burning of waste material or other combustible material is prohibited. [LAC 33:III.1109.B]

111 Emissions of particulate matter which pass onto or across a public road and create a traffic hazard by impairment of visibility or intensify an existing traffic hazard condition are prohibited. [LAC 33:III.1303.B]

112 Maintain best practical housekeeping and maintenance practices at the highest possible standards to reduce the quantity of organic compounds emissions. Good housekeeping shall include, but not be limited to, the practices listed in LAC 33:III.2113.A-1-5. [LAC 33:III.2113.A]

113 Failure to pay the prescribed application fee or annual fee as provided herein, within 90 days after the due date, will constitute a violation of these regulations and shall subject the person to applicable enforcement actions under the Louisiana Environmental Quality Act including, but not limited to, revocation or suspension of the applicable permit, license, registration, or variance. [LAC 33:III.219]

114 Carbon monoxide \leq 15.85 tons/yr. [LAC 33:III.501.C.6]

Which Months: All Year Statistical Basis: Annual maximum

115 Lead compounds \leq 5.34 tons/yr. [LAC 33:III.501.C.6]

Which Months: All Year Statistical Basis: Annual maximum

116 Nitrogen oxides \leq 18.92 tons/yr. [LAC 33:III.501.C.6]

Which Months: All Year Statistical Basis: Annual maximum

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GRP006

- 117 Sulfur dioxide \leq 1200.15 tons/yr. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: Annual maximum
- 118 VOC, Total \leq 1.23 tons/yr. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: Annual maximum
- 119 Benzene $<$ 0.001 tons/yr. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: Annual maximum
- 120 Toluene $<$ 0.001 tons/yr. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: Annual maximum
- 121 n-Hexane \leq 0.35 tons/yr. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: Annual maximum
- 122 Formaldehyde \leq 0.01 tons/yr. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: Annual maximum
- 123 Sulfuric acid \leq 0.36 tons/yr. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: Annual maximum
- 124 Particulate matter (10 microns or less) \leq 21.48 tons/yr. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: Annual maximum
- 125 Submit standby plan for the reduction or elimination of emissions during an Air Pollution Alert, Air Pollution Warning, or Air Pollution Emergency. Due within 30 days after requested by the administrative authority. [LAC 33:III.5611.A]
- 126 During an Air Pollution Alert, Air Pollution Warning or Air Pollution Emergency, make the standby plan available on the premises to any person authorized by the department to enforce these regulations. [LAC 33:III.5611.B]
- 127 Submit Emission Inventory (EI)/Annual Emissions Statement: Due annually, by the 31st of March for the period January 1 to December 31 of the previous year. Submit emission inventory data in the format specified by the Office of Environmental Assessment, Environmental Evaluation Division. Include all data applicable to the emissions source(s), as specified in LAC 33:III.919.A-D. [LAC 33:III.919.D]
- 128 All affected facilities shall comply with all applicable provisions in 40 CFR 60 Subpart A. [40 CFR 60]
- 129 Permittee shall devise and operate according to a standard operating manual that describes in detail procedures for controlling fugitive dust emissions within process buildings. These procedures shall at minimum include the applicable requirements of (c)(3) through (c)(5) of Section 63.545. This standard operating procedure manual shall be kept onsite and a copy of which shall be sent to the Administrator or his delegated authority for review and approval. [40 CFR 63.545]
- 130 All affected facilities shall comply with all applicable provisions in 40 CFR 63 Subpart A as delineated in Table 1 of 40 CFR 63 Subpart X. [40 CFR 63]
- 131 Submit Title V permit application for renewal: Due 180 calendar days before permit expiration date. [40 CFR 70.5(a)(1)(iii)]
- 132 Submit Title V monitoring results report: Due semiannually, by March 31st and September 30th for the preceding periods encompassing July through December and January through June, respectively. Submit reports to the Office of Environmental Compliance, Surveillance Division. Certify reports by a responsible company official. Clearly identify all instances of deviations from permitted monitoring requirements. For previously reported deviations, in lieu of attaching the individual deviation reports, clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. [40 CFR 70.6(a)(3)(iii)(A)]
- 133 Submit Title V excess emissions report: Due quarterly, by June 30, September 30, December 31, March 31. Submit reports of all permit deviations to the Office of Environmental Compliance, Surveillance Division. Certify all reports by a responsible official in accordance with 40 CFR 70.5(d). The reports submitted on March 31 and September 30 may be consolidated with the semi-annual reports required by 40 CFR 70.6(a)(3)(iii)(A) as long as the report clearly indicates this and all required information is included and clearly delineated in the consolidated report. [40 CFR 70.6(a)(3)(iii)(B)]
- 134 Submit Title V compliance certification: Due annually, by the 31st of March. Submit to the Office of Environmental Compliance, Surveillance Division. [40 CFR 70.6(c)(5)(iv)]

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GRP009 F-Cap Furnace Cap

- 135 Furnaces Charge Feed rate \leq 100000 tons/yr. Notify the Office of Environmental Compliance, Enforcement Division if product throughput exceeds the maximum listed in this specific condition for any twelve consecutive month period. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: Twelve-consecutive-month maximum
- 136 Equipment/operational data monitored by technically sound method daily. [LAC 33:III.501.C.6]
Which Months: All Year Statistical Basis: Daily average
- 137 Equipment/operational data recordkeeping by electronic or hard copy daily and monthly. Keep records of the charge rate to each furnace daily and monthly, as well as the combined total charge rate for the last twelve months. Make records available for inspection by DEQ personnel. [LAC 33:III.501.C.6]
- 138 Submit report: Due annually, by the 31st of March. Report the combined charge rate of both furnaces for the preceding calendar year to the Office of Environmental Compliance Enforcement Division. [LAC 33:III.501.C.6]



Photo 35: Bottom of the crucible of the Blast Furnace.

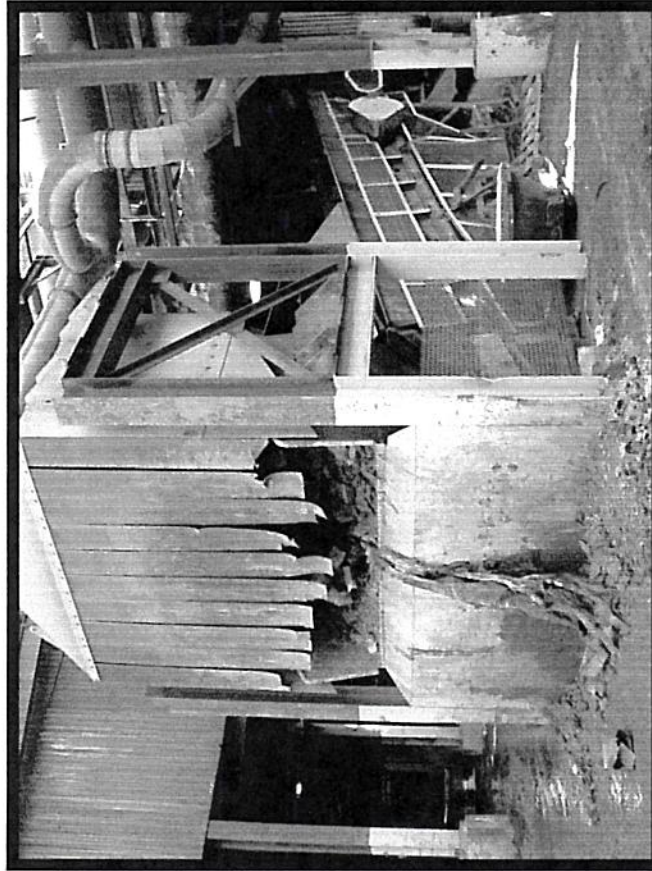


Photo 36: Blast Furnace feed charge.

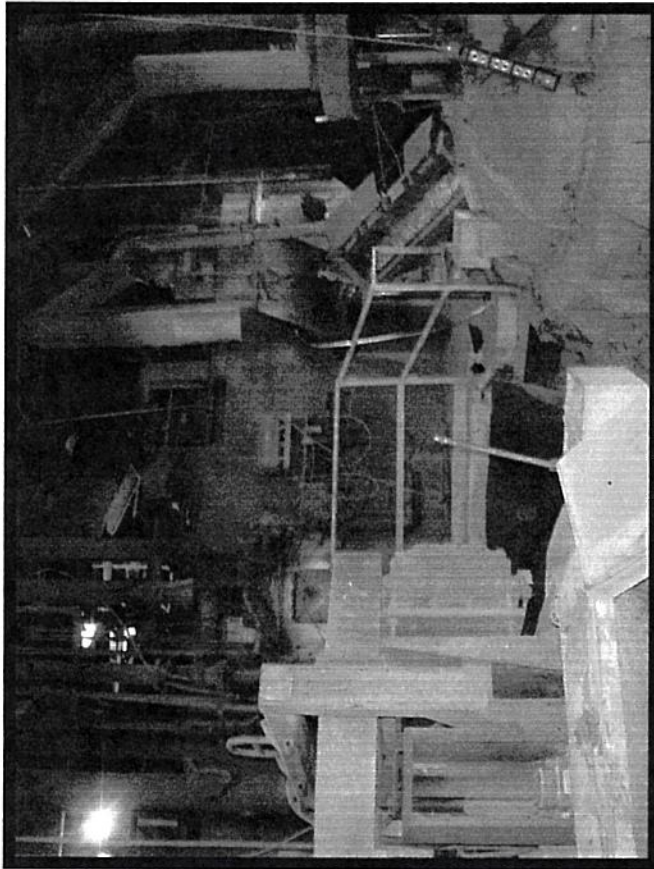


Photo 37: Back end of Reverb Furnace and kettle hoods.

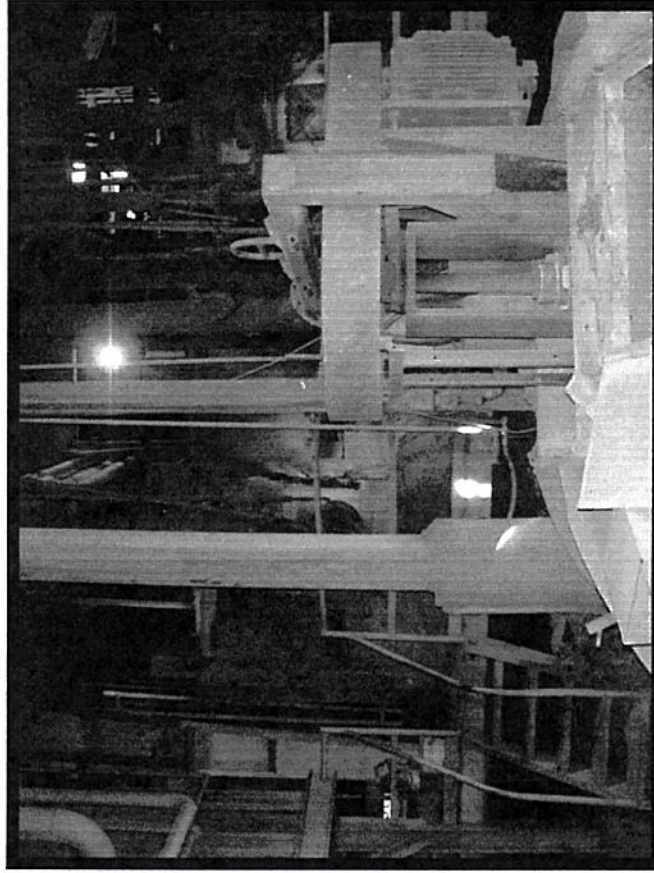


Photo 38: Front End of Reverb Furnace.